1. A human motion following controller for augmenting motion of items shown on a computer display, the display being coupled to a computer of the type which controls positioning of the items through operating system controls, comprising:

a camera for capturing frames of data corresponding to a first image of at least part of a user at the computer display;

signal processing means coupled to the camera for (a) detecting differences between successive frames of data corresponding to motion of the first image, and (b) communicating differences information to the computer to reposition display of the items through operating system controls, the items being repositioned on the display by an amount corresponding to the motion of first image.

2. A controller of claim 1, wherein the items comprise a computer cursor.

3. A controller of claim 1, wherein the items comprise a scene view.

4. A controller of claim 1, further comprising a PC card for installation within the computer and for communication on a computer bus, the signal processing means being substantially resident with the PC card for communicating differences information to the bus.

5. A controller of claim 1, wherein the camera comprises means for capturing augmented frames of data corresponding to a second image of part of the user at the computer display, the signal processing means further comprising means for detecting differences between successive augmented frames of data corresponding to motion of the second image and for communicating augmented difference information to the computer to reposition display of the items through operating system controls, the items being repositioned on the display by an amount corresponding to motion of the first and second images.

6. A controller of claim 1, further comprising frame difference electronics for storing and subsequently subtracting pixel-by-pixel difference data.

7. A controller of claim 6, wherein the difference electronics comprise multiple frame memory, a subtraction circuit, and a state machine controller/memory addresser to control data flow.

8. A controller of claim 1, further comprising N frame video memory for storing frames of image data.

9. A controller of claim 1, further comprising a DSP for implementing select algorithms on difference frames or raw frames of image data.

10. A controller of claim 9, further comprising memory selected from the group of EPROM and RAM.

11. A controller of claim 9, further comprising means for interfacing the DSP to a PCI bus in the computer.

12. A controller of claim 1, further comprising MPEG compression electronics for compressing video for the computer.

13. A controller of claim 1, wherein the signal processing means comprises frame differencing means for removing unchanged information from image frames.

14. A controller of claim 1, wherein the signal processing means comprises frame memory to buffer one or more image frames.

15. A controller of claim 14, wherein the signal processing means comprises a frame differencer for reading a delayed frame from the frame memory and for subtracting the delayed frame from a current image frame.

16. A controller of claim 1, wherein the signal processing means comprises correlation means for determining row and column shifts corresponding to differences between a current image frame and a delayed image frame.

17. A controller of claim 16, wherein the signal processing means comprises best fit algorithm means for minimizing the shifts to provide alignment.

18. A controller of claim 17, wherein the best fit algorithm means utilizes a peak detect algorithm.

19. A controller of claim 1, wherein the signal processing means comprises video cursor control for enabling and alternatively disabling cursor control.

20. A controller of claim 19, wherein the video cursor control comprises means responsive to keystrokes at the computer.

21. A controller of claim 19, wherein the video cursor control comprises means responsive to a blink of an eye of the user.

22. A controller of claim 19, wherein the video cursor control comprises means responsive to sound generated by the user.

23. A controller of claim 22, further comprising a microphone to detect the sound.

24. A controller of claim 1, wherein the signal processing means comprises a complex multiplier for providing a two dimensional inverse FFT operation.

25. A controller of claim 24, wherein the signal processing means comprises a peak detect for determining a shift associated with aligning difference images.

26. A controller of claim 1, wherein the signal processing means comprises FFT means for providing a two dimensional FFT of image data.

27. A controller of claim 1, wherein the signal processing means comprises means for identifying parts of the user, the parts being selected from the group of a hand, elbow, head, neck, ears, and forehead.

28. A controller of claim 1, wherein the signal processing means comprises means for detecting left and right movement of a head of the user and for shifting the items in response to the left and right movement.

29. A controller of claim 1, wherein the signal processing means comprises means for detecting rotational movement of a head of the user and for rotating the items in response to the left and right movement.

29. A controller of claim 1, wherein the signal processing means comprises means for repositioning the items, if appropriate, at approximately every 1/30th of a second.

30. A controller of claim 1, wherein the signal processing means comprises means for repositioning the items at a selected magnification as compared to actual movement of the user.

31. A controller of claim 1, wherein the signal processing means comprises means for storing image data of a head of the user at various orientations relative to the camera and for correlating image data to the stored image data to define head orientation, the head orientation being used to reposition the items.

32. A controller of claim 1, wherein the signal processing means comprises IR means for detecting heat associated with the user and for repositioning the items at a rate correlated to the heat.

33. A controller of claim 32, wherein the items correspond to computer gaming display images.

34. A controller of claim 32, wherein the heat corresponds to user stress.

35. A controller of claim 1, further comprising at least one other camera arranged to take images of at least a second part of the user.

36. A controller of claim 35, wherein the one other camera takes image data in a second electromagnetic spectrum.

37. A controller of claim 1, wherein the camera comprises a DSP.

38. A controller of claim 37, wherein the DSP processes difference information for the computer.

39. A controller of claim 1, wherein the signal processing means comprises a CPU within the computer.

40. A controller of claim 1, wherein the signal processing means comprises means for processing multiple image zones in frames of image data and for repositioning the items according to characteristics between zones.

41. A controller of claim 40, wherein one zone comprises image data corresponding to at least one eye of the user.

42. A controller of claim 41, wherein the signal processing means comprises means for determining a blink of the eye.

43. A controller of claim 42, wherein the signal processing means comprises means for disabling and alternatively enabling cursor control based upon the blink.

44. A controller of claim 1, wherein the signal processing means comprises means for processing image data to determine motion of at least one eye of the user and for repositioning the items based upon the motion.

45. A controller of claim 1, wherein the signal processing means comprises means for processing image data to determine motion of a pupil of at least one eye of the user and for repositioning the items based upon the motion.

46. A controller of claim 1, wherein the camera comprises a zoom attachment for automatically zooming into a desired magnification of at least one eye of the user.

47. A controller of claim 1, wherein the camera comprises zoom means for automatically focusing on the user as the user moves in distance from the camera.

48. A controller of claim 47, wherein the signal processing means comprises means for enlarging or shrinking the items on the display in response to focusing by the zoom means.

49. A controller of claim 1, wherein the signal processing means comprises means for determining edges of a head of the user and for repositioning the items in response to movements of the edges.

50. A controller of claim 1, wherein the signal processing means comprises means for isolating one or more objects held by the user and for repositioning the items in response to movement of the objects.

51. A controller of claim 1, wherein the signal processing means comprises means for isolating one or more parts of the user and for repositioning the items in response to movement of the parts.

52. A controller of claim 1, wherein the parts comprise at least one of a hand, head, and a foot.

53. A controller of claim 1, wherein the signal processing means comprises means for isolating one or more symbols associated with the user and for repositioning the items in response to movement of the symbols.

54. A controller of claim 1, further comprising a second camera constructed and arranged for viewing the user from above, the signal processing means having means for repositioning the items in response to movement detected from images in the second camera.

55. A controller of claim 54, wherein signal processing means comprises means for repositioning the items in response to forward and backward movement of the user as detected by the second camera.

56. A controller of claim 1, further comprising re-calibration means connected with the signal processing means for repositioning the items to an original position in response to a re-calibration event.

57. A controller of claim 1, wherein the re-calibration means comprises a microphone and the event comprises a sound generated by the user.

58. A controller of claim 1, wherein the camera comprises the re-calibration means for detecting a blink of the user.

59. A system for controlling a computer, comprising:

a transducer for converting optical signals to electrical signals;

electronic means for converting electronic signals to digital data;

signal processor means for detecting motion in the digital data and providing a digital representation of said motion;

communication means for entering one or more of the electronic signals, digital data, and digital representation into the computer to manipulate a computer display in response to the motion.

60. A system of claim 59, wherein the computer comprises the signal processor means.

61. A system of claim 59, wherein said signal processor comprises a digital signal processor separate from a CPU within the computer.

62. A system of claim 59, wherein the transducer, electronic means and signal processor are constructed and arranged into a single device in communication with the computer.

63. A system of claim 59, wherein the communication means comprises one of RS170 video, a PCI bus interface, a digital computer interface, a serial computer interface.

64. A system of claim 59, further comprising means for repositioning a computer cursor in response to the motion.

65. A system of claim 59, wherein the transducer comprises one or more of a visible CCD camera and an IR camera.

66. A system of claim 59, wherein the transducer comprises a CCD camera having at least 2x2 imaging pixels.

67. A system of claim 66, wherein the camera comprises optics with various fields of view.

68. A system of claim 59, wherein the transducer comprises one of a CCD or a CMOS integrated circuit with digital outputs.

69. A system of claim 68, wherein the transducer generates RS170 ouput.

70. A system of claim 68, wherein the transducer generates RS170 digital output.

71. A system of claim 68, wherein the transducer generates digital resolutions of 4 bits or greater

72. A system of claim 59, wherein the signal processor comprises a video frame memory.

73. A system of claim 59, wherein the signal processor comprises frame difference functionality.

74. A system of claim 59, wherein the signal processor comprises video frame difference memory.

75. A system of claim 59, wherein the signal processor comprises correlation functionality.

76. A system of claim 59, wherein the signal processor comprises means for determining best fit motion.

77. A system of claim 59, further comprising means for controlling cursor movement.

78. A system of claim 59, further comprising means for segmenting video images to provide multiple digital representations of the motion corresponding to different portions of the digital representation.

79. A system of claim 78, wherein the optical signals are generated through image acquisition of a portion of a human.

80. A system of claim 78, wherein the optical signals are generated by viewing multiple features of a human.

81. A system of claim 59, further comprising neural net means for learning user motion over time.